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ABSTRACT

Perceived control has become an important construct for health care research. Since the processes and outcomes of health and illness are constantly mediated and affected by communication, the relationship between a person's belief in his/her personal control of events and health care interactions is an important component of the theory and practice of health communication. An examination of the research literature on the relationship between locus of control and resistance to influence reveals important differences in terms of how internals and externals respond to influence attempts. While externals may expect to be passive receivers of treatment and advice, overly directive approaches may challenge the internal to sabotage treatment outcomes unless he/she is an active participant in planning and executing treatment. Externals may resist specific knowledge of their condition, while internals may respond poorly unless given specific information. The amount of structure or controllability in a treatment situation may facilitate or impede the progress of treatment, depending upon its congruence with the patient's control expectancies. The control style of caregivers is at least tacitly present in their intervention/message style and enthymematically interacts with the patient's worldview to influence the patient's expectation for success. There is some evidence to suggest that congruent control messages facilitate actual treatment success as well. (Footnotes are included and 151 references are attached.) (RAE)

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Abstract

Perceived control has become an important construct for health care research. Since the processes and outcomes of health and illness are constantly mediated and affected by communication, the relationship between a person's belief in his/her personal control of events and health care interactions is an important component of the theory and practice of health communication. This paper reviews the available evidence regarding the relationship between locus of control and the more or less interpersonal or rhetorical aspects of therapeutic interventions, especially as they influence salient perceptions of the treatment, medical interaction, or social support. Implications for health care research and practice are offered.

Perceived Control, Communication, and Health:

An Integrative Review

Beliefs regarding personal control exert a pervasive influence on a person's adaption to life (see Langer, 1983; Lefcourt, 1981a, 1982, 1983, 1984a, 1984b; Rotter, 1966, 1975). A positive expectation for personal control, whether reasonable or not, promotes successful life adaptions, while a belief that external agents such as fate, luck, or powerful others rule one's life produces a life path strewn with significant obstacles (see Garber & Seligman, 1980; Langer, 1983; Lefcourt, 1973,1982).

It is not surprising, then, that the construct of perceived control has received much attention in health related research. Given that illness is an unrepresentative, ambiguous, and stress-producing condition for most people, perceptions of control become especially salient for the ill (see Strickland, 1978; Sullivan & Reardon, 1985; Wallston, Maides & Wallston, 1976). Perceptions of control have been linked to health related factors such as life stress (Johnson & Sarason, 1978; Kobasa, Maddi, & Kahn, 1982; Lefcourt, 1983), coping with illness or disability (Strickland, 1978; Sullivan & Reardon, 1985), and health preventative practices and rehabilitation (Abella & Heslin, 1984; Sandler, Reese, Spencer, & Harpin, 1983; Schlenk & Hart, 1984).

None of these health-related factors exists in the abstract. They are embedded in the web of relations a person has with the world. Our relationships are defined and mediated through communication (Ruesch & Bateson, 1968; Watzlawick, Beavin, & Jackson, 1967). Therefore, our assessment of perceived control affects our health not only through direct

and dramatic means (i.e., through events associated with utter helplessness and loss of hope such as severe reactive depression, "voodoo death," and other fairly unusual phenomena, as discussed in Seligman, 1975), but most pervasively through its effect on everyday tasks such as how we mobilize social support, participate in treatment, and provide and accept information and influence with health care providers. Given that perceived control has been shown to significantly influence these facets of health care (Eckenrode, 1983; Sandler, et al. 1983), the empirical connections between perceived control and health in general, and between perceived control and health care interactions in particular (e.g. doctor-patient interaction, therapeutic interventions, social support during chronic illness), hold great promise for enriching research and practice in the social and interpersonal dimensions of health care.

This paper will serve two functions. First, it will review the literature related to perceived control and the more or less interpersonal, social or rhetorical aspects of health and health care. Since this literature is currently a "mixed bag" of various approaches, this review, while not exhaustive or conclusive, may contribute to a more coherent perspective on this work. Second, this paper will highlight the evidence for <u>enthymematic</u> (Bitzer, 1970; Delia, 1970; Norton, 1983) links between control beliefs and health related information, persuasive strategies and treatment types. From this perspective, this paper will promote the proposition that persons accept or resist situations and

messages based on their correspondence with their beliefs about control. Although this approach originated with the "congruence hypothesis" described elsewhere (see Sandler et al. 1983), this discussion will review significant new research as well as bring a more directly communicative perspective to earlier studies. Specifically, these sections will make connections between control and a more general view of the persuasive functions of health care.

Before pursuing these themes, the backround of the locus of control construct and its relation to interpersonal behavior will be reviewed, with special attention being given to interpersonal behaviors relevant to health and illness settings (e.g. information seeking, compliance and autonomy, assertiveness).[1] Then, studies linking perceived control to social dimensions of health and illness such as the origin of health beliefs, coping strategies, the utilization of social support, and the social constraints put upon various coping behaviors will be reviewed. Next, the interaction between perceived control and the perceived characteristics of health care situations or message types will be discussed. Research directions will then be offered.

Perceived Control and Interpersonal Behavior

The concept of control, in one form or another, pervades the vocabulary of psychology and communication study (see Bochner & Krueger, 1979; Knapp & Miller, 1985; Lefcourt, 1982). However, the most widely used and validated empirical vehicle of perceived control research has

been the locus of control construct, first conceived within the social learning theory of Julian Rotter (Lefcourt, 1982; Rotter, 1966). Social learning theory posits that behavior is a joint function of the value of a particular goal and the individual's expectancy for goal attainment. Locus of control is a generalized expectancy regarding either internal or external control of reinforcement. Rotter (1966) has described this distinction as follows:

> A perception of causal relationship need not be all or none but can vary in degree. When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of forces surrounding him. When the event is interpreted in this way by an individual, we have labeled this a belief in <u>external control</u>. If the person perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics, we have termed this a belief in <u>internal</u> control (p. 1).

Expectancies for control may be general or specific and therefore apply globally to many situations (as does Rotter's early measure) or specifically to certain contexts such as social affiliation, achievement, marriage, and health (see Lefcourt, 1981; Miller, Lefcourt, & Ware, 1983; Wallston & Wallston, 1981). Social and/or interpersonal processes may be influenced by one's overall control beliefs as well as being the subject of specific control expectancies (see Lefcourt, 1981; Lefcourt, Martin,

Fick, & Saleh, 1985; Paulhus, 1983). Both generalized and specific expectancies for control (as measured by general vs. situation or domain-specific instruments) predict how an individual interacts with his/her social environment, although situation specific measures are expected to yield more precise relationships.

Differences in interpersonal behavior may be the result of differing generalized control beliefs, while interpersonal experiences may also contribute to a specific expectancy for control of the interpersonal domain, and result in differing expectancies for interpersonal control. Both general and situation-specific control beliefs should make certain interpersonal tactics or styles more or less logical or preferable.

Existing links between perceived control and interpersonal behavior most relevant to health care involve the areas of control and the utilization of information, resistance to influence, assertiveness and shyness, and preferences for directive or nondirective environments. This literature will be reviewed briefly and two perspectives for explaining and integrating these findings will also be discussed.

Control and Information Utilization

Research has shown that internals pursue a more assertive, proactive and autonomous stance in interpersonal situations. Towards these ends, internals and externals vary in the way they utilize information.

Early research indicated that internals acquired more task relevant information than externals. Seeman and Evans (1962) found that internal patients in a tuberculosis hospital knew more about their condition and actively sought out more information from the staff than did externals. Seeman (1963) also found this link between information seeking and internality among prison inmates. Davis & Phares (1967) found that internals sought more information than externals when a persuasive task was described as skill dependent but not when described as chance dependent (see Lefcourt, 1982).

The usual explanation for these results in that internals, anticipating control over an event, see the relevance or value of information that may facilitate this control. Externals either do not see the relevance of the information, given that they perceive no contingency between their behavior and the outcome, or they may ignore relevant information as part of defensive strategy for explaining what they expect to be their impending failure (see Phares, 1979). Some evidence suggests that externals can perform as well as internals when response-outcome contingencies have been made explicit through "cue explication" (Gregory, Chartier and Wright, 1979; Lefcourt, 1967; see also Lefcourt, 1982, p. 72-78). However, as Lefcourt (1982) has remarked, "Externals seem to require that a structure be offered before they are likely to perform in an adroit fashion" (p. 78).

Control and Influence

A person's control orientation may also determine how he/she explains successful and unsuccessful attempts at influence. Cialdini and Mirels (1976) found that internals attributed higher intelligence to those who yielded rather than resisted their persuasive appeals, while externals made the opposite assessment. Thus, internals and externals were moved to attribute characteristics to compliant and noncompliant others "consistent with [their] existing perception of personal competence" (p. 396). These results are consistent with a study by Levine and Uleman (1979) that suggests that internals and externals differ in their causal attributions for success and failure, externals being more likely than internals to attribute success to the workings of the environment and failure to the self.

Locus of control is an important variable in predicting a person's resistance to outside influence attempts as well (Biondo & McDonald, 1971; Crowne & Liverant, 1963; Doctor, 1971; Getter, 1966; Lefcourt, 1967; Lefcourt & Wine, 1969; Ritchie & Phares, 1969). From an integrated view of this research it is evident that the externally oriented person tends to comply in influence situations, while an internally oriented person resists influence in various and complex ways.

For example, Gore (1962, cited in Lefcourt, 1982, p. 48-49) found that internal subjects were especially resistant to attempts at subtle influence by an experimenter. Research by Getter (1966) and Strickland (1970) has shown that internals are more resistant than externals to

experimenter control in verbal conditioning experiments. Cravens and Worchell (1977) found that internals were more resistant to the rewarding and coercive power tactics used by group leaders. Baron & Ganz (1972) and Baron, Cowan, Ganz & McDonald (1974) have found that internals perform most effectively when their success is self discovered (intrinsic feedback) while externals perform better under conditions of "unverifiable verbal praise" (extrinsic feedback)(see also Bellack, 1972, 1975; Bellack & Tillman, 1974; Lefcourt, Lewis, & Silverman, 1968). Externals are more influenced by the status of a source of information than are internals (Ritchie & Phares, 1969; Ryckman, Rodda, & Sherman, 1972). Cherulnik and Citrin (1974) provide evidence to show that internals and externals display differential levels of psychological reactance (Brehm, 1966; Brehm & Brehm, 1981) in response to an elimination of their freedom of choice dependent upon whether it appeared to be motivated by a personally relevant or impersonal cause. Spector (1983) provides some correlational evidence to suggest that externals are more influenced by normative pressures to conform while internals rely on the information provided by the other.

However, the increased resistance to influence and verbal assertiveness found among internals does equate with indiscriminate verbal dominance. While internals are generally more assertive (Cooley & Nowicki, 1984; Hartwig, Dickson, & Anderson, 1980), Bugental, Henker, and Whalen (1976) have shown that it is the nontrusting or fatalistic external that indiscriminately employs more coercive power tactics or inflexibly displays verbal assertiveness (see also Canary, Cody, & Marston, 1986).

Control and Situation Structure

Locus of control has been shown to predict preferences for the amount of situation structure, control, or choice in experimental, therapeutic, and classroom environments (Harrison, Lewis, & Straka, 1984; Harpin & Sandler, 1979; Killman, 1974a; Killman, Albert & Sotile, 1975; Minor & Roberts, 1984; Trice, 1980; see also Sandler, Reese, Spencer & Harpin, 1983). For example, Harpin & Sandler (1979) found that external males had a harder time adjusting to low control classrooms than high control classrooms, while internal males received poorer grades in high control classrooms. Harrison, Lewis & Straka (1984) found that when confronted with an undesirable task, satisfaction was enhanced for internals by being given a choice while externals were more satisfied when given no choice. Killman (1974a), Abramowitz, Abramowitz, Roback, & Jackson (1974), and others have provided evidence that suggests that internals and externals differentially desire and benefit from structure or directiveness in therapeutic situations as well. (This research will be discussed in greater detail later in the paper.)

Much of the above work supports the person by situation congruence approach to perceived control (see Kahle, 1980; Lefcourt, 1982; Sandler, Reese, Spencer and Harpin, 1983). The congruence hypothesis suggests that persons seek out and show greater motivation and satisfaction in situations that correspond with their beliefs about personal control. Therefore, internals are motivated to seek out, exert greater motivation in and derive greater gratification from situations allowing personal

control while externals may prefer more structured, less opportune environments. This congruence hypothesis is also supported in much of the literature concerning control and health care discussed later.

The Two-process Approach to Perceived Control

Two decades of work has refined the theoretical dynamics of the control construct as well. A theoretical advance of special interest to us here is the primary-secondary control approach of Rothbaum, Weisz, and Snyder (1982), since it provides a more general and informative perspective to the motivational subtleties of perceived control than can be found in earlier locus of control work. The Rothbaum et al. approach is consistent with the predictions of the congruence hypothesis and also helps to explain why persons would persist in pursuing what to others might seem to be passive or unassertive strategies when more proactive behavior might be more successful.

Rothbaum et al. (1982) cogently argue that those reporting external locus of control are not chronic believers in uncontrollability or helplessness as earlier approaches seem to assume. These authors suggest that real uncontrollability is a "temporary condition from which persons are highly motivated to escape" (p. 28). A person's persistence in passive or "inward" behaviors is best explained as an attempt to exert "secondary" control of the situation by adapting or changing the self rather than attempting to change the world. That is, a lack of faith in primary (internal) methods of control motivates the person to avoid

further disappointment and vulnerability by employing such secondary control tactics as: predicting and adjusting one's expectations to the uncontrollable outcome (predictive control), aligning oneself with or capitalizing on the workings of chance (illusory control), identifying oneself with more powerful others (vicarious control), or attempting to understand and therefore accept one's current lot (interpretive control). While these tactics are not attempts to change the situation, they are nonetheless attempts to "sustain control" of one sort or another by "going with the flow" of events.

The congruence hypothesis and the primary-secondary approach to control will inform much of our later discussion, especially with regard to how internals and externals adapt to health-related situations. These perspectives suggest that the converse of internal control is not perceived uncontrollability or helplessness but the defensive motivation to maintain secondary control. Since Rothbaum et al. suggest that, "Secondary control . . . is particularly likely in cases of prolonged failure to obtain highly desired rewards and important incentives or cases in which the inability is perceived as permanent" (p. 28), secondary control may be an especially salient explanation for the behavior of those coping with chronic illness or disability. These approaches suggest that messages or interventions are given meaning from within the control ideology of the client, and that the most effective interventions may be those that are <u>enthymematically</u> congruent with the client's beliefs about control.[2]

In addition, these approaches suggest that attempts to change a client's behavior in ways that threaten or undermine his or her preferred agenda for control will be resisted by the client in order to preserve his/her sense of control (see Strong & Claiborn, 1982, p. 38-39). For example, Rothbaum et al. (1982) suggest that therapeutic interventions may inadvertently undermine the client's secondary control strategies by assuming that the lack of internal control equals the absence of coping strategies (p. 31). The result may be an otherwise inexplicable increase in client stress, depression or resistance. This perspective also suggests that internal control is sometimes a dispreferred or dysfunctional coping strategy. Therefore, these concepts are especially helpful in illuminating the motivations behind seemingly irrational reactions to provider interventions.

Control, Interpersonal Behavior and Health

The relationships investigated between perceived control and interpersonal behaviors in health care settings has thusfar yielded mixed results. This work involves the following general areas: (a) the social antecedents of health control beliefs, (b) control and health related information seeking and utilization, (c) the relationship between control, assertiveness and health, (d) control, coping and the mobilization of social support, and (e) the interactive effects of personal control beliefs and intervention type or message type. Each of these areas are discussed below.

Social Antecedents of Health-related Control Beliefs

Several studies have investigated the social antecedents of control beliefs or the nature and type of life events that seem to encourage various control orientations (see Lefcourt, 1982). Bryant & Trockel (1976) discovered that affectively significant recalled early life events had an impact on the person's adult locus of control orientation. In a study using 34 female undergraduates, they founds that:

> relatively large amounts of affectively significant, recalled life stresses (preschool) were clearly related to strong external control orientation in adulthood; and . . . relatively large amounts of recalled positive life stresses over which the respondent likely had some control in high school years tended to be related to strong internal control orientation during adulthood (p. 269).

This association did not obtain for recalled life events labeled neutral in affect by their procedure. While the authors concede that these results may indicate only that internals and externals recall life events congruent with their adult control orientation rather than experiencing differential early positive and negative life stresses, this work begins to suggest that a person's control orientation is associated with what a person derives from their life experiences.

Tolor (1978) provides some provisional support for a relationship between early life experiences and health related control beliefs. In a study using 86 men and women, Tolor found that women who had a greater

than average number of childhood illnesses also had a significantly greater external control score on the Health Locus of Control Scale (Wallston, Wallston, Kaplan, & Maides, 1976). A greater than average number of childhood accidents or the severity of childhood illness was not related to their health locus of control orientation. Contrary to expectations, health locus of control was not associated with adjustment (Bell, 1961) or death anxiety (Tolor & Resnikoff, 1967) for men or women.

DeVellis, DeVellis, Wallston and Wallston (1980) found that, among the 286 epileptics they studied, greater predictability or control of seizure activity was related to beliefs in internal control, while increased severity, earlier onset, or increased number of years of seizures was associated with external health control beliefs as measured by the Multidimensional Health Locus of Control Scales (Wallston, Wallston & DeVellis, 1978). For this particular group, early experiences with seizures were related to beliefs that chance and powerful others controlled their health. However, as Lau (1982) points out, those with early onset of seizures also report higher scores on the internal control dimension of the Wallston, et al. scale in this study.

Lau (1982) investigated the origins of health locus of control beliefs using the Lau-Ware multidimensional health locus of control instrument and self report instruments of early health habits, prior experiences with sickness, and recent sickness experiences. He reported that, as expected, early health practices were associated with internal health locus of control. Also, early sickness experiences in one's family, "had . . .

pervasive effects, since many such experiences led to beliefs that health is not controllable . . . and that self-care and doctors are relatively inefficacious" (p. 331). Given the strong association found between early sickness experiences and a belief in the lack of efficacy of self-care in preventing illness, Lau speculated that early sicknesses comprised unrepresentative but vivid examples that distorted or biased judgements of the relationship between personal behavior and health or illness. Once health control judgements are formed, they seem resistant to change, as Lau found no relationship between control beliefs and recent sickness.

Abella and Heslin (1984) investigated the role of health locus of control in determining how much an individual's health behavior was influenced by the health behavior of family and friends. These authors reasoned that the internals' preventative health behavior would be a function of the value they themselves placed on good health regardless of the behavior of those around them. By contrast, externals should be more influenced by the behavior of those around them in terms of whether or not to engage in preventative health practices such as exercise, not smoking, weight control, nutrition, and the like. In a sample of 71 male undergraduates they found that those who valued health and had an internal health locus of control reported that they performed the most preventative health behaviors. Their results also showed that although a negative social environment affects the preventative health behavior of internals as well as externals, "in interpersonal situations it is the person with an external locus of control who is most adversely affected by family and friends negative health behaviors" (p. 288).

Locus of Control and Health-related Information-seeking and Utilization

The work of Seeman and Evans (1962) and Seeman (1963) reviewed earlier suggests that internals seek more information about their condition or situation than externals. This seems reasonable since adequate information about a situation is a logical prerequisite to attempts to predict and control the situation. This basic finding has been refined by later work although the results of later studies are not always positive.

Wallston, Maides & Wallston (1976) and Wallston, Wallston, Kaplan and Maides (1976) reported greater information seeking, as measured by the number of health pamphlets selected, by those scoring high in both the relative value they placed on health and internality regarding the control of health. However, the results of other studies indicate that this finding should be interpreted cautiously. Krantz, Baum, & Wideman (1980) actually found a negative relationship between health locus of control and information-seeking. DeVito, Bogdonowicz and Reznikoff (1982) have shown that the difference between health internals and externals in information seeking is more likely the result of high health value externals avoiding information about health problems. DeVito et al. obtained this result for both intended and actual information seeking, and speculated that externals who value their health have a greater need to deny their vulnerability to illness.

In a later study (reported in Wallston & Wallston, 1981) the Wallston group failed to find greater information seeking by undergraduate health internals with regard to herpes, but did find that "internal high health

value undergraduates chose significantly more hypertension-related pamphlets and asked more hypertension-related questions than the other three groupings" (p. 223). Given the Devito et al. study above, these results suggest either that there may be some subtle positive relationship between internality, health value and information seeking and/or that hypertension, being less salient to the college age sample, aroused less defensive externality or denial than the topic of herpes. In reviewing the work in this area, Wallston and Wallston (1981) stated that despite the promising connections between health locus of control and information seeking in their early studies, research in this area, "has led to mostly barren harvests" (p. 220).

However, it has been demonstrated that internals facing a potentially anxiety-producing dental surgery adapt better after they are given specific rather than general information about the procedure and what they might expect (Auerbach, Kendall, Cuttler, & Levitt, 1976). Conversely, externals in this study responded more favorably to general rather than specific presurgery information. Auerbach et al. concluded that specific presurgical information reinforced the internals' belief that they can control or minimize their discomfort, while general information reinforced only "the ambiguity of the situation and their lack of personal control over it" (p. 816). Externals responded more favorably to ambiguous presurgical information given their predisposition to deny responsibility or abrogate control of the outcome. Lamontagne (1984) found that internality was associated with active vs. passive coping styles in

children anticipating elective surgery, and that active copers were given more detailed information about their condition by medical personnel than passive copers. Taken together, these studies suggest that internality is associated with greater receptivity to health-related information, if not with actual information seeking.

In a study of health locus of control in 89 diabetic adults, Ruzicki (1984) failed to find a relationship between health locus of control and preference for participative or prescriptive approaches to diabetes education. While younger subjects preferred participative education, "a large number of all subjects (64%) preferred prescriptive approaches regardless of health locus of control type" (p. 375). It was found that health internals had more previous "formal diabetes education" than externals, but "whether or not initial attendance at classes was related to existing beliefs, or whether the classes instilled these beliefs has not been investigated" (p. 375).

At this point it is important to remember that the Seeman and Evans (1962) and Seeman (1963) studies that spawned the initial research interest in this area did not concern information seeking but "information assimilation," (see Lefcourt 1982, p. 61-65) and the relationship between the control measure and relevant knowledge of one's condition or situation in these studies is quite modest (r^2 = .10 in Seeman & Evans, 1962 and r^2 = .05 in the Seeman, 1963 report). The results of Seeman (1963) also suggest that goal-relevance may influence information assimilation, since, for reformatory inmates, their control orientation predicted their knowledge of parole-relevant information but not general information about the reformatory. Although Davis & Phares (1967) have shown that internals

actively sought out more information about a target person in an interpersonal influence task than externals, the information sought concerned a relevant, immediate goal. A lack of goal-relevance or immediacy may have moderated this effect in the Devito et al. (1982) and Wallston and Wallston (1981) work since, although hypertension is certainly something to be avoided, this condition may not be linked to any immediate outcomes or salient values for the person except "good health" in the abstract. This state of affairs may offer little motivation for internals to seek control-relevant information in the present. Consequently, the only significant variance in such studies involves the externals' immediately salient need to avoid anxiety-producing information.

Overall, these studies provide some indication of the relationship between locus of control and health related information seeking. Most often they indicate that externals avoid acquiring information that highlights their vulnerability to disease or discomfort and that externals adapt better when the available information is vague rather than specific. Internals seem more inclined to use information to adjust to their predicaments but evidence regarding their active motivation to seek out potentially threatening health related facts is inconclusive at best.

Locus of Control, Assertiveness, and Situational Control

Research reviewed earlier indicates a clear relationship between locus of control and assertive or submissive behaviors in situations involving attempted influence or the resistance of the influence of others.

Internals and externals seem most comfortable in interactive situations that correspond to their beliefs in the controllability of situations (Brownell, 1982) and react most favorably to feedback or directives congruent with their control expectations (Baron, et al. 1974; Craven & Worchel, 1977; Kahle, 1980). These proclivities have health related implications, as various studies show.

Williams & Stout (1985) have found that highly assertive persons are significantly more internal than those who are relatively nonassertive and that highly assertive people also suffered fewer health problems than persons low in assertiveness. Since their measures of perceived control and assertiveness were independent, they offered no information regarding the contribution of locus of control in mediating the assertiveness/health relationship. Tanck & Robbins (1979) found that assertiveness is associated with direct and proactive strategies for handling stress and that internals are more likely to use personal strategies such as meditation for handling stress while externals are more likely to daydream, use alcohol or seek professional help. Kobasa, Maddi, & Kahn (1982) determined that the constellation of personality characteristics that Kobasa (1979) termed "hardiness" (commitment, control, and challenge) had a buffering effect on the otherwise illness-provoking effects of stressful life events and that "hardiness has its greatest health-preserving effect when stressful life events mount" (p. 175).

In a review of their research on the relationship between the control of desired outcomes and adjustment among the elderly, Reid and Ziegler

(1981) concluded that, "those senior citizens who feel they have control over desired outcomes are more content, happy, and generally satisfied with their lives" (p. 151). In a similar vein, Langer & Rodin (1976) and Rodin & Langer (1977) found that permitting or encouraging more choice and responsibility among nursing home patients resulted in greater reported happiness and activity as well as increased involvement and participation. The long term study by Rodin and Langer (1977, reported in Langer, 1983) revealed that "residents in the responsibility-induced condition showed higher health and activity patterns, mood and sociability that did not decline as greatly and mortality rates that were lower" (p. 248). Conversely, Avorn & Langer (1982) provided some evidence that overly solicitous care may engender a deterioration of perceived competence or induced helplessness (see also Langer, 1979).

For the elderly and/or institutionalized, however, situational constraints may limit the relationship between locus of control and assertive or proactive behavior or may change how that behavior is defined by others. Wolk (1976) has determined that the usual academic view of the personal control/adjustment relationship "has failed to take into account the degree to which the environment allows a generalized expectancy to be important for adjustment related behavior and attitudes" (p.420). In a study using elderly persons in retirement facilities rated as high or low in situational constraint, Wolk (1976) determined that internal control beliefs were related to developmental adjustment, life satisfaction, self concept and activity level only in settings of low situational

constraint. It was also found that persons in highly constraining situations were more likely to espouse external control beliefs. While it was not clear from this study whether the elderly persons in this sample chose constraining or nonconstraining retirement homes based on their control orientation or whether the setting itself influenced their control perceptions, Wolk speculated that, "it may indeed be accurate to conclude that perceived personal control in the elderly individual varies with the nature of the setting in which the elderly person resides" (p.426-427).

In a more recent study, Arling, Harkins, and Capitman (1986) investigated the effects of institutionalization on perceived control in a way that, "distinguished clearly between the effects of entering an institution and the many other factors that may affect perceptions of control in an impaired elderly population" (p. 39). Perceived control was measured with the Locus and Range of Activities Checklist (Hulicka, Morganti, & Cataldo, 1975) which assesses perceived control of everyday occurrences such as where and when the person visits friends, how he or she spends money, when he or she has time to themselves, etc. (p. 45). In a panel study using 151 persons either at risk for nursing home care or going through pre-admission screening, they found a "strong independent effect of institutionalization" on the perceived control of everyday life events. They also found that functional impairment and negative life events also predicted a deterioration of perceived control over time, whether the person was institutionalized or not (p. 53).

Woodward and Wallston (1987) have speculated that the beneficial effects of situational control in health care settings may be mediated by the person's actual desire for control. Furthermore, a decline in the person's sense of self-efficacy over time, due to the effects of increased age and illness, may act to suppress the desire for the control of health care as the person ages. In a study of 116 adults, ranging in age from 20 to 99, they found that persons over 60 desire less control of both day-to-day activities and health care than younger persons. Older individuals also report less self-efficacy with regard to general and health related activities. These authors suggested that self efficacy with regard to health mediated the desire for control of health among the elderly persons in this study.

Mullins (1982) has also found that locus of desired control and various facets of functional ability and health status influenced nurses' assessments of whether elderly persons were good or poor patients. This study demonstrated that "residents with greater locus of desired control were significantly older, were better educated and saw their health as poorer [and] . . . the proportion of patients assessed as poor patients by the staff is significantly greater among those patients with greater LDC than among those with lesser LDC" (p. 272). Mullins concluded that, in the nursing home setting, "those elderly patients who are less physically able and also desire to control their own environment are more troublesome to staff and thus are assessed as poorer patients" (p. 275).

The above research suggests that the relationship between perceived control, proactive behavior, and adjustment to age or ill health is multifaceted. Reid (1984) has speculated that, under conditions of chronic illness or disability, unqualified expectations for internal control of one's life may not contribute to successful adaption. Since control can be seen both as a means to an end as well as an end in itself, persons both need to be able to relinquish control to others when necessary and yet need to maintain an adaptive sense of control over the course of their lives. Reid's (1984) "multidimensional compensation approach" to the control/adjustment relationships acknowledges the need of the disabled to comply to the demands of their health care institution and its regimen and yet encourages finding areas where "participatory control" is both possible and a desirable alternative to passivity. Through participatory control the patient comes to balance the benefits of their internal prerogatives and the resources available from external sources.

The relationship between control, assertiveness, and adaption revealed in these various approaches is complex, yet it consistently implies that some measure of active control of one's environment promotes better psychological and physical health and better adjustment. However, perceived or desired control is not universally positive but must be adjusted to the realistic constraints of one's situation and one's level of functional ability.

Perceived Control and the Mobilization of Social Support

Various authors have proposed that a significant feature of the health preserving effect of perceived control is its stress-buffering effect when individuals are faced with setbacks or challenges (see Lefcourt, 1983). Although unrealistically high expectations for control may actually increase stress (Gilbert & Mangelsdorff, 1979), and internals seem to deny the greater levels of threat-related anxiety they do experience (see Strickland, 1978, p. 1195), a sense of personal control is consistently associated with better coping and more proactive health behavior.

Social support has also been associated with coping and adjustment (see Albrecht & Adelman, 1984). For example, Phifer and Murell (1986) found that among a population of 1,233 persons 55 and older, both poor health and low social support predicted depression, and "those respondents with the combination of poor physical health and low social support were at greater risk for depressive onset than those having either risk factor alone" (p. 287). A study by Schultz and Saklofske (1983) has shown that loneliness is associated with the perceived low quality of social supports.

Differential utilization of social support by internals and externals may account for some of the stress or illness buffering effects of perceived control (Eckenrode, 1983; Sandler & Lakey, 1982; Seeman, Seeman, & Sayles, 1985; Silver & Wortman, 1980). As Alcalay (1983) has remarked, social support comprises "psychosocial assets" that aid coping and adaption. Various studies have shown that perceived control influences how well persons mobilize or utilize these assets. The central findings of these studies is that while externals may receive more social support, internals derive more benefit from the support they receive.

Sandler and Lakey (1982) found that while externals received more social support than internals, social support moderated the level of anxiety and depression for internals but not for externals. These authors speculated that, "It may be that internals are able to utilize this assistance effectively while externals are not" (p. 77; see also Lefcourt, 1983, p.264). Among women health center users, Eckenrode (1983) found that internal health locus of control and a belief in the efficacy of health-seeking related positively to the mobilization of social supports, independent of the number of supports available. Like Sandler and Lakey (1982), Eckenrode (1983) concluded that, "internals may not possess more social resources than externals, but . . . their resources are more effectively mobilized in times of stress" (p. 523).

Lefcourt, Martin, & Saleh (1984) investigated the relationship proposed in Sandler and Lakey (1982) with the affiliation-specific control subscale found in the Multidimensional-Multiattributional Causality Scale (Lefcourt, VonBaeyer, Ware, & Cox, 1979) and a measure of the need for affiliation versus autonomy (Jackson, 1967). Three studies generally supported the notion that there is no guaranteed stress-buffering effect conferred by social support itself or by an internal locus of control in the absence of social support. Those who espouse internal control for affiliative outcomes and yet perceive themselves as autonomous rather than affiliation dependent derive the greatest stress buffering or mood preserving effects from social support(s) in the face of negative life events.

The defensive external (Hochreich, 1975; Phares, 1979) may be the least likely to utilize the social supports available to them. A correlational study by Schill, Ramanaiah, & Toves (1982) has shown that defensive externals (those who are both external on the Rotter scale and low on the Rotter interpersonal trust scale) are more vulnerable to stressful life experiences than are either internals or congruent (i.e. more trusting) externals. These authors conclude that:

> the defensive pattern of blame projection and mistrust employed by defensive external scorers isolates them from potential sources of support in their environment and enhances their vulnerability to stress. The capacity of congruent external persons to attribute misfortune to fate but still trust and seek support from others gives them a significant advantage in coping with stress (p. 878).

Thus, the defensive external is most vulnerable to stressful life events since he/she believes that relief from negative events resides neither in him/herself nor the social network.

Perceived control and social support influences actual health care behaviors as well. Schlenk and Hart (1984) found that, with a diabetic population, compliance with a self-care regimen was linked significantly to social support and the internal and "powerful others" dimensions of the Multidimensional Health Locus of Control Scale (Wallston, Wallston & DeVellis, 1978; cf. Wurtele, Britcher, & Saslawsky, 1985). Sullivan and

Reardon (1984) found significant links between health locus of control, social support, and active versus passive coping styles (i.e., a fighting spirit versus denial, stoic acceptance, or helplessness) among breast cancer patients. They concluded that, "patients who are not highly satisfied with their social support and who perceive themselves as having little control over their health tend to use passive styles of coping such as helplessness/hopelessness or stoic acceptance" (p. 719). It appears, then, that the perceived quality of one's support system and control beliefs may systematically influence how effectively persons strive to overcome their disability.

Locus of Control and the Enthymematic Value of Health Care Interventions

Health care interaction is in large measure an influence process. Factors that affect the client's acceptance or cooperation with treatment affect treatment success. Beginning with the original work of Rotter and Mulry (1965), many researchers have demonstrated that internals and externals prefer performance situations congruent with their control orientations, internals preferring skill-related tasks and externals preferring chance tasks (see Kahle, 1980). As discussed earlier, internals and externals also differ in their susceptibility to and reactions to social influence. Various studies have shown that locus of control moderates a person's response to situations designed to change his/her attitudes or behavior, such as psychological counseling and teaching.

A good deal of research has investigated the potential interaction between various treatment types and locus of control on therapeutic outcomes (see Sandler, Reese, Spencer & Harpin, 1983; Strickland, 1978). These investigations usually hypothesize that congruence between potential controllability or amount of structure in the treatment regimen and the individual's expectancy for control should yield the greatest reported treatment satisfaction and efficacious behavior change. That is, persons will show greater satisfaction with and greater therapeutic gain from treatments whose structure corresponds with their overall control beliefs. Studies have also been conducted that manipulate only treatment instructions or therapeutic explanations, keeping the task or treatment the same for both internals and externals (see Sandler, et al., 1983; Foon, 1986a; 1986b).

However, as is so often the case with perceived control research, the link between control and type of treatment or treatment related messages is not always a straightforward one. Although Sandler et al. (1983) correctly suggest that, "Taken together, the . . . research suggests that client locus of control is a significant cognitive variable to be considered when designing optimal treatment programs" (p. 217), the results of early studies are sometimes misleading (see Messer & Meinster, 1980) and empirical results do not always confirm the sort of results that would be anticipated by a simple correspondence between control beliefs and the characteristics of treatment.

Given the potential value of this work for the health communication researcher and practitioner, this work will be reviewed extensively. Although some of this section will duplicate the efforts of Sandler et al. (1983), newer studies will enlarge the path they initiated. More importantly given our present purposes, this material will be reviewed from a communications perspective, and the value of the enthymematic links between the client's control beliefs and the treatments and explanations presented to him/her will be stressed.

Locus of Control and Treatment Structure

Various studies have investigated the links between a person's control orientation and his/her preference for and satisfaction with therapies based on their amount of structure or degree of controllability by the client. Jacobson (1970, cited in Sandler et al. 1983) provided 100 undergraduates with written descriptions of behavior versus analytic therapies and asked them which they would choose if they needed therapy. Those who chose behavior therapies tended to be more external in outlook. Trice (1980) found that among 34 junior high school students in a behavior modification program, externality was positively correlated with the participant's rating of various aspects of the program. Friedman and Dies (1974) investigated the reactions of 36 test anxious students to three treatments varying in their potential controllability, from open-ended counseling (high potential for input or control), systematic desensitization (less opportunity for input), and automated (audiotaped) desensitization (no opportunity for input). When questioned at the end of the program, "external subjects provided with counseling and systematic desensitization felt that they

retained too much control of therapy, while internals generally indicated an optimal amount of control in counseling" (p. 921). Internals also showed more motivation to individualize their anxiety hierarchies in this study.

In a validation study for their Health Locus of Control Scale, Wallston, Wallston, Kaplan, and Maides (1976) found that, among 22 overweight women in either self-directed (internal) or group (external) weight reduction programs, health locus of control interacted significantly with program type in determining satisfaction with treatment. Health locus of control did not interact significantly with treatment type to influence the actual weight lost by participants, but the reported trend was in the expected direction (p. 583-584).

Kilmann (1974) hypothesized that internals would prefer shared leadership in a group counseling experience while externals would prefer a more dominant leader. However, when 82 female university students were asked to review descriptions corresponding to these group types and choose between groups, he found that externals preferred shared leadership while internals showed no preference.

Although these studies permit only tentative conclusions, it does appear that externals choose helping situations with greater structure, either because they distrust their own ability or possibly choose them as a defensive strategy for avoiding blame for failure (see Hochreich, 1975; Messer & Meinster, 1980). In choosing counseling situations, internals seem to mirror the behavior of their internal cohorts in managerial and group process situations and desire more participation and shared leadership (see Brownell, 1982; Cravens & Worchel, 1977).

Perceived control also appears to interact with treatment type in influencing a client's perception of the therapist. Given the internals' predilection to resist outside influence, Nowicki, Bonner, and Feather (1972) hypothesized, "that, as compared with external Ss, internal Ss interacting with Es, using a relaxation technique, will perceive them as more dominating and less loving [as measured on the Leary (1957) circumplex] than the same Es, using a traditional interview technique" (p. 435). The interaction effect approached significance for the dominance dimension of the Leary checklist and achieved significance for the love dimension. Post hoc tests showed that externals in the relaxation condition rated therapists more loving than did other groups.

Perceived control not only influences the clients preference for or satisfaction with various types of counseling, but also seems to moderate their effectiveness. However, early studies using conditions such as structured versus unstructured marathon therapy as their control-relevant conditions have produced negative (Kilmann & Howell, 1974) or equivocal results (see Messer & Meinster, 1980). These early failures may be due to the equivocations inherent in calling otherwise open-ended procedures such as marathon therapy directive or nondirective, a lack of clear-cut criteria for client improvement, or the fact that groups studied often had no clear-cut clinical goal. For example, Abramowitz, Abramowitz, Roback, & Jackson (1974) report differences in outcome for internals in directive versus nondirective groups, but Messer & Meinster (1980) have questioned, among other things, the way they categorized persons as clinical

successes or failures. Kilman, Albert, and Sotile (1975) also tested the interaction between marathon versus traditional groups and perceived control on therapeutic outcome, but as Messer & Meinster (1980) again note, "the lack of specific treatment goals in this nonclinical sample makes it difficult to evaluate the one positive outcome among multiple outcome measures and its relevance to clinical populations" (p. 285).

The results of later studies are more encouraging. Schwartz and Higgins (1979) found that internals were less comfortable with an automated assertiveness training procedure, and while internals in the control and placebo conditions were more assertive than externals, internals did not generalize what they learned in the automated procedure to improve their subsequent assertiveness scores as much as externals. Ollendick and Murphy (1977) found that internals derived greater benefit from a cognitive rather than muscular relaxation technique while the opposite was true for externals.

It must be noted here that subjects in the Ollendick and Murphy (1977) study were not reacting to treatment structure or lack thereof, although greater individual control may have been possible in the cognitive relaxation condition. Rather, it seems that clients were reacting to the treatment focus, either on things presumably within their control (their thoughts) or things more external to their conscious volition (the level of tension in their muscles). Treatments that wittingly or inadvertently focus on an internal or external explanation for the problem or its cure are therefore in a different class of control study, since rather than merely

offering variable opportunities for control, they offer the beginnings of an enthymematic link between the person's control orientation and the implicit messages or control ideology embedded in a treatment.

Locus of Control and Treatment-related Messages

If counseling is seen as an influence process (Foon, 1986; Strong & Claiborn, 1982), then the client's control orientation provides a "major premise" in his/her worldview, and creates expectations that help to make the provider's tacit and overt premises for treatment either immediately plausible and acceptable or implausible and inconsistent with the client's preferred methods of primary or secondary control. Messages congruent with the client's control ideology should do more than sidestep reactance or apathy, but should make provider messages more convincing and supply greater motivation for compliance.

Although it is often difficult to differentiate between treatments that merely inhibit or invite controllability (such as automated desensitization versus open-ended counseling) and those promoting differing control ideologies, various studies have touched on the more or less rhetorical aspects of treatments, such as the rationale given for the treatment and/or the attributions given for whom is responsible for the treatment's success.

A series of studies by Foon (1985;1986a;1986b) has shown that a congruence between the control orientations of therapist and client influences both the therapist's and client's anticipated probability of therapeutic success. More importantly, these studies seem to indicate that

the therapist's control ideology is evidenced in his/her therapeutic messages and these messages interact with the client's control orientation to influence both therapist and client perceptions of potential therapeutic gains.

Foon (1985) asked 176 clinical psychologists to respond to twelve client vignettes that manipulated the client's symptoms, social class, and control orientation. She found that, "The more internal the therapist, the more positive were their expectations for most kinds of clients, with the exception of external clients with whom external therapists felt more positive" (p. 359). In a further analysis, she found that similarity between therapist and client control orientation accounted for more variance in terms of clinical expectations than did the client's class, symptoms, gender, or the therapist's education, orientation, or nature of employment (p. 360).

Foon (1986a;1986b) tested the influence of counselor locus of control on clients' expectations with similar results. Sixty-seven mildly neurotic client volunteers were asked to rate five minute counselor-client role play vignettes and rate their expected probability of success with the counselor. The counselors' control orientation was manipulated by varying his/her stated views of the locus of the client's problem. Although the explained variance was modest (R^2=.12), the match between the control orientation of counselor and rater was a significant predictor of the raters' expectation for success in therapy with this counselor.

More importantly, the congruence between therapist/client control orientations seems to influence client expectations in actual therapy. In a study of 78 clients and 21 clinical psychologists, Foon (1985b;1986b) found that therapist and client locus of control had both direct and interactive effects on the therapist's and client's expectations for therapeutic success and that a congruence of control beliefs predicted the client's predicted therapeutic gains.

Foon (1985b) found that both internal therapists and internal clients were more optimistic about the progress of therapy, that therapists were more optimistic about internal clients, and that clients were more optimistic when paired with internal therapists. Moreover, a congruence of control beliefs between therapist and client significantly influenced expectations for success as reported by both therapist and client. The client's locus of control at the completion of therapy influenced both the therapist's and client's perceptions of the success of therapy, and once again, client-therapist locus of control congruence contributed to both therapist and client perceptions of therapeutic success.

Of special interest is the finding that therapist-client locus of control congruence as assessed at the completion of therapy predicted perceived therapeutic outcome but that initial therapist-client locus of control correspondence did not. Foon (1985b) suggests that this result, "reflects the therapist's recognition that the client has adopted a perception of the situation similar to the therapist's view concerning the most rational resolution of the problem" (p. 716). These results support

the interpretation that the therapist's control orientation is manifested in his/her actual therapeutic messages and that, "the communication of this view from the therapist to the client would seem likely given the process of communication in psychotherapy" (p. 716).

Rosen and Osmo (1984) add additional evidence for this assumption. In a study employing twenty clients at a university counseling center, these authors found that, using four trained social workers as coders, locus of control was related to the control-relevant ways that clients defined their problems to the counselor. This result suggests that a person's control orientation is discernible in talk without it being the explicit focus of talk, and therefore available for the evaluation or emulation of others.

Overall, these results suggest a direct enthymematic link between a helpers' control ideology and the clients' locus of control orientation in influencing the clients' anticipated probability of success in treatment. Although actual therapeutic gains are not assessed in these studies, there may be no necessary link between congruence and improvement as Messer & Meinster (1980) seem to demand of earlier reports (p. 283-4). Rather, these results suggest that a congruence between control beliefs between helper and client seems to enhance the credibility and empathy of the helper, which may promote, if not produce, therapeutic gains.

Burton (1977) manipulated the control orientation of messages related to smoking cessation with intriguing, if less that successful, results. As part of the general directions for a smoking cessation therapy, Burton included messages that explained the smoking habit either as a learned habit

the client could control or as an addiction that the client could not control but could arrest by avoiding cigarettes altogether. A control group got neither explanation, but engaged in an open ended discussion of their smoking history and received the behavioral instructions given to all groups (postponing the first cigarette by two hours each day, drinking 10 glasses of water, and deep breathing). Based on the percentage of subjects who had successfully abstained at the two-week followup period, the hypothesized interaction between the message and the client's control orientation was nonsignificant, although the results were in the expected direction. That is, "The number of internal Ss stopping smoking is seen to increase consistently from the addicted rationale to learned rationale to no rationale, with the number of external Ss stopping smoking increasing consistently in the opposite direction" (p. 562). It should be noted that the small numbers of subjects in each of the conditions further limits the interpretation of these results.

Best and Steffy (1971) crossed locus of control scores with a similar set of internally or externally focused message conditions within an aversive conditioning procedure for smoking cessation with negative results. Once again, the low number of subjects used (8 subjects per cell for the LOC X message interaction) may be partially to blame.

Best and Steffy (1975) combined locus of control, personal vs. experimenter management of smoking cessation, and a "satiation" (temporarily doubling the pre-treatment smoking rate) versus a "focusing on external smoking cues" condition on smoking reduction. They found that, "internal

subjects in the satiation condition smoked less over time than internals not receiving satiation . . . Externals do not differ as a function of condition over time" (p. 159). This result seems to indicate that internals in this study prefer to do something to help themselves quit smoking, even if that procedure is uncomfortable. A nonsignificant trend in this data seems to indicate that externals actually did worse in the satiation condition, and no satiation externals did a bit better than no satiation internals.

Another interesting, if inconclusive, finding in this study concerns the internals' and externals' self-reported reasons for smoking. Internals assigned a significantly greater proportion of their daily cigarettes as "self rewards" and "relaxants" than externals, while externals attributed more of their cigarettes to "habit," that is, "no particular reason" than internals.

Best (1975) found a significant interaction between treatment focus (satiation/punishment vs. environmental analysis of smoking cues) and locus of control for smoking cessation. It is interesting to note that the results for the congruent internal condition matched those of the control group and had the greatest reductions in smoking, followed by the congruent external condition. These results suggest that congruence between treatment-control-focus and perceived control did not promote greater success than that achieved by subjects in the control group, but a mismatch between treatment and control beliefs impeded progress. It is also interesting to note that Best (1975) found that the timing of

counter-attitudinal advocacy (early for highly motivated Ss and following successful abstinence for low motivated Ss) facilitated treatment success. Best (1975) reasoned that subjects low in motivation or skeptical of their future successful abstinence would resist a dissonance-derived change in attitude that should otherwise follow an attitude-change procedure like delivering a short speech about the dangers of smoking, while highly motivated subjects would be helped by this procedure. However, successful abstinence should decrease the resistance of those with initial skepticism. Overall, Best (1975) found that, "subjects matched on both locus of control compatibility and motivation compatibility smoked significantly less than subjects matched on neither . . . Smoking rates for subjects matched on one dimension and mismatched on the other were intermediate . . ." (p.6).

Inspired by the work of Best and Steffy (1975), Snowden (1978) tested the effects of differing forms of aversive imagery (covert sensitization) and locus of control on successful heroin abstinence for 42 participants in a methadone maintenance program. In an internal imagery condition, subjects visualized or imagined the aversive physical symptoms and consequences of heroin abuse, while in the external condition subjects visualized drug-related contexts and connected these to aversive consequences. An appropriate rationale accompanied each treatment, which linked heroin abstinence to either willpower and responsibility or to external factors such as the therapist or the elimination of external pressures. While the results yielded no significant main effects for locus of control or treatment type, a significant interaction was obtained in the expected

direction. Based on the number of morphine-positive urine tests and a posttreatment improvement in abstinence, subjects in treatments congruent with their control orientation were more successful than those in mismatched groups, although the plot of cell means indicates that externals fared no better in congruent treatment than internals in incongruent treatment. Although the differing rationale given to subjects may have contributed to treatment, Snowden concedes that, "The contribution of variation in rationale, which was confounded with treatment image variation, remains to be assessed" (p. 48).

Chambliss and Murray (1979a; 1979b) have reported interesting studies highlighting the effects of providing congruent or incongruent control attributions after some therapeutic success has been achieved. These studies link the person's overall expectancy for control with a causal attribution designed to highlight their self-efficacy in treatment.

In one study (Chambliss & Murray 1979a), 48 volunteers who wished to reduce their smoking were given placebo pills and asked to use their willpower to reduce their smoking. After this initial period, half of the subjects were told that the pills were a placebo and that the 50% reduction in smoking they had achieved had been due to their own efforts. The other half of the subjects were not told about the placebo, and were therefore able to attribute their success to the placebo if so inclined, although the experimenters did not actually claim that the placebo would help them reduce their smoking. After a second week, their results revealed that, "For the internal subjects, the reduction of smoking was significantly greater (using

the Newman-Keuls procedure) in the Self-Efficacy condition than in the Drug Efficacy condition . . . . The Efficacy Manipulation had little effect on external subjects" (p. 94).

In a second study, Chambliss and Murray (1979b) used a more deliberate version of their earlier procedure with 68 women seeking weight reduction. In this study, "every effort was made to maximize the credibility of the medication" (p. 350). A set of weight-reduction strategies such as moderate diet, exercise, and modified eating habits were also included. After two meetings, the "self efficacy" group was told that the drug they had been taking was a placebo, congratulated on the success of their own efforts, and given a lecture on the role of self control on weight loss. The "drug efficacy" group was not told of the placebo nature of the drug, and although the drug was discontinued at this point, they were told that the drug was long-lasting and were encouraged to put their faith in its effects. Two weeks later, their results showed a significant interaction between locus of control and efficacy attribution on weight lost. While internals in the self-efficacy condition lost the most weight, externals in the drug-efficacy condition also improved. These results echoed those for internals in their smoking reduction study, and unlike the results of the smoking study, these results also demonstrated that externals would respond to their congruent treatment if the drug-efficacy attributions were made explicit enough.

These studies suggest intriguing enthymematic links between locus of control and control-relevant aspects of treatment, including the rationale given for treatment and the control ideology of the caregiver. The

underlying control ideology of illness and wellness espoused in treatment may significantly influence the client's perceptions and motivations in treatment, given its congruence with their own beliefs.

Thus far, the results seem to indicate a stronger effect between congruent control-relevant treatment messages and the client's perceptions of the treatment than between congruent control messages and actual differences in treatment effectiveness. The studies of Chambliss and Murray (1979a; 1979b) are exceptions to this rule, since they do show clear therapeutic gains, but these studies differ from most other control belief X message studies in that they also provide both internals and externals with an "auspicious moment," an opportunity to realize the amount of actual control they have of their problem. It is unfortunate that, given the nebulous criterion variables used in early studies (see Messer & Meinster, 1980), the only clearcut treatment goals studied thusfar have involved rather intractable, addictive habits like smoking (Burton, 1977) or heroin addiction (Snowden, 1978). When studies employing a variety of more manageable treatment goals are conducted, the contributing influence of the nature of the problem or illness itself and our culturally derived beliefs about the controllability of the illness can be assessed as moderating effects of the LOC X treatment message relationship on treatment effectiveness.

It also appears that a clearer correspondence between locus of control and intervention effectiveness occurs when control-relevant messages, rather than the treatment structure itself, is manipulated. This generalization is

in keeping with the cue explication hypothesis discussed earlier (see Gregory, Chartier & Wright, 1979; Lefcourt, 1982). This is not to say that treatment structure is not salient to the individual, but that automated smoking aversion training and marathon therapy provide poor control-relevant cues when compared to the actual messages of therapists or experimenters.

Results are also more promising when a clear goal is involved. This sort of trend is predicted by social learning theory (see Lefcourt, 1982; Naditch & DeMaio, 1975). Thus, smoking and weight reduction show clearer results than the nonspecific benefits of marathon therapy.

Overall, these studies suggest that control-relevant premises embedded in the therapeutic context and expressed in provider messages may be a critical, defining component of the intervention itself. As Bugental, Whalen, and Henker (1977) have remarked about a similar concept:

> What we are emphasizing here is that change strategies (behavioral management, educational programs, psychotherapy, medical intervention) have implicit attributional textures which interact with the attributional network of the individual to influence treatment impact (p. 881).

Thus, interventions have a rhetorical dimension that interacts with the control beliefs of the client in beneficial and deleterious ways. Providers' judgments, in turn, are influenced by the control-relevant worldview of the client (see also Diener & Dweck, 1978, 1980; Dweck, 1975; Valins & Nisbett, 1971).

Summary and Implications for Research

Given the research reviewed above, the interpersonal and/or rhetorical dimensions of perceived control promise to become important constructs for health communication research. Given that control perceptions moderate both the person's response to health and illness and the social dynamics of health care, the effects of control perceptions on health care situations are multiform.

The implications of perceived control on doctor/patient interaction are various and important. Given the research reviewed earlier on locus of control and resistance to influence, there appear to be important differences in terms of how internals and externals respond to influence attempts. While externals may expect to be passive receivers of treatment and advice, overly directive approaches may challenge the internal to sabotage treatment outcomes unless he/she is an active participant in planning and executing treatment (see Reid, 1984; Sandler, Reese, Spencer, & Harpin, 1983). Externals may resist specific knowledge of their condition, while internals may respond poorly unless given specific information.

However, Hill and Bale (1981) have remarked that there are advantages and disadvantages to manipulating active/passive treatment approaches to suit the client's control expectancies. Specifically, in cases where the client's active control may either facilitate or constitute the eventual goal of treatment, reinforcing passivity in externals may be trading short term compliance for long term failure. Thus, although externals are willing conformers, especially to high status sources (see Larsen, Triplett, Brant,

& Langenberg, 1979) this propensity may impede the real spirit of medical compliance. Since medical success implies time-limited interventions designed to put the patient back on his/her feet, physicians must paradoxically promote both compliance and eventual patient autonomy from treatment. Merely reinforcing a stable relationship based on dependency may promote an illusion of patient incompetence (Langer, 1979).

The amount of structure or controllability in a treatment situation may facilitate or impede the progress of treatment depending upon its congruence with the patients's control expectancies. More importantly, the work of Foon (1986a;1986b) and others has demonstrated that the control style of caregivers is at least tacitly present in their intervention/message style and enthymematically interacts with the patient's worldview to influence the patient's expectation for success. There is some evidence to suggest that congruent control messages facilitates actual treatment success as well.

Continued research efforts are needed to clarify the relationships between control beliefs, control-relevant cues in the structure or type of treatment, control-relevant cues present in our cultural presumptions about the problem itself, and the overt and covert control premises embedded in provider messages. As Lefcourt (1984a) has remarked, weak but promising statistical linkages are only valuable in the early stages of an investigation. What is required now is research aimed at elaborating the strength and generality of the interactive links between control beliefs, treatment situations, and treatment-related messages across disease or problem types, and across the specifics of particular treatment situations.

Communication scholars are in a position to directly contribute to the understanding of the perceived control/message congruence dynamics in the patient-provider relationship. This knowledge will aid the development of effective, enthymematic communication interventions that promote positive change. The benefits of this knowledge cannot be underestimated since messages that promote efficacious patient change are the most cost effective of all treatments, while provider-patient relationships that impede progress needlessly complicate medical care (see Kreps & Thornton, 1984).

Perceived control also plays a significant role in determining the success of therapeutic interventions or social support programs. As Frank (1973, 1976) has cogently observed, failure to meet life's demands may result in an accelerating cycle of demoralization and alienation that eventually produces apparent psychopathology. One's expectancy for control may determine how well one mobilizes social support and therefore avoids a continuing cycle of alienation/demoralization. This relationship may be especially clear when the person is confronted with the challenge of a chronic and/or stigmatizing illness (see Harre, 1976; Rodin & Langer, 1980).

Communication researchers are in a position to elaborate the factors that influence or facilitate the benefits of social support (see Albrecht & Adelman, 1984). Research has already shown that one's expectations for personal control of affiliative situations moderates the stress-buffering benefits of social support (Lefcourt, Martin, Fick, & Saleh, 1985). Future research may further specify the communicative factors that influence important non-medical resources such as these.

The construct of perceived control has broad and heuristic implications for theory, research, and practice in health communication. The interplay between control beliefs, communication and health care provides the communication researcher with a uniquely promising opportunity to pursue research agenda that are likely to yield results of great theoretical and practical value.

Footnotes

[1]Portions of this discussion (p. 5-10) are drawn from a fuller treatment in Brenders, 1987.

[2]While the enthymeme can be a difficult concept to define, Bitzer (1970) distinguishes the enthymeme, or "rhetorical syllogism," from the syllogisms of demonstrative logic by noting that while demonstrative proofs "lay down" premises to support a conclusion, enthymemes invite the hearer to supply premises from his/her own beliefs in a way that completes the argument or supports the conclusion in question. Enthymemes, although often deficient proofs in the formal sense, are, according to Bitzer (1970), the "strongest possible" rhetorical proofs, since by being "jointly produced" by speaker and audience, "they have the virtue of being self persuasive"(p. 408).

Delia (1970) attempted to distance the enthymeme from formal logic and reconcile it with the "psycho-logical" human proclivities outlined by cognitive psychologists. Delia asserted that, "If a desired opinion or action can be demonstrated to be consistent with fundamental beliefs and values, it tends to be assimilated; if an idea or behavior opposed can be shown to be inconsistent, it tends to be rejected" (p. 146).

Both Bitzer (1970) and Delia (1970) discuss the enthymeme from within the framework of "strategic verbal choice-making" (Clark & Delia, 1979); that is, from the perspective of a speaker intentionally working to persuade an audience. However, enthymemes can also be seen as naturally occuring components of human interaction (see Norton, 1983, p. 30-31). Therefore, messages serve an <u>enthymematic</u> function when they invite or accommodate certain premises or worldviews, and by implication, discount or discourage competing worldviews.

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